A

PRACTICAL ANALYSIS OF SEVENTY CASES

OF

INFLAMMATORY, FUNCTIONAL, AND STRUCTURAL

DISEASE OF THE HEART;

WITH OBSERVATIONS

ON THE TREATMENT AND PREVENTION.

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PREFACE.

The following observations form a communication in the London Journal of Medicine for this month. By the kind permission of the Publishers they are now reprinted, with the hope that they may reach some who may not have had the opportunity of perusing them in the pages of that valuable Periodical.

S. S. A.

Park Street, Grosvenor Square,
April 1851.

DISEASE OF THE HEART,

ETC.

The examples of Heart-disease of which I propose, in this communication, to give some account, are divisible into inflammatory, functional, and organic. The line has been drawn as correctly as the nature of the subject, and the difficulty of always forming an accurate diagnosis, would permit. Examples of disease may have been regarded as simply functional, which may have comprised some organic lesion; and, on the other hand, cases may have appeared to involve rather more organic change than was really present. Nevertheless, I am confident that, on the whole, the return is reasonably correct. Every exertion was made to ascertain the facts of each case, which have been faithfully recorded. Structural disease is, for the most part, the result of inflammatory or of functional disease; and it is difficult to say exactly where the one ceases, and the other commences. In making a division, I have preferred being directed rather by prominent and well marked features, than by very minute observation or elaborate reasoning.

The total number of cases of heart-disease, of which this paper treats, is seventy. Of these, three were inflammatory; twenty-five were functional; forty-two were structural.

I. INFLAMMATORY DISEASES OF THE HEART.

Respecting the cases of inflammation, a few words will suffice. They are only three in number.

CASE I. This was a boy, four years of age. The form of disease was advanced pericarditis, with copious sero-purulent effusion in the pericardium, and very abundant woolly-looking deposit of lymph upon the whole exterior surface of the heart. The aortic orifice was somewhat contracted and corrugated. The patient, eleven weeks before, had been attacked with scarlet fever.[1] Anasarca occurred three weeks after. Inflammation of the left lung and pleura had likewise supervened, causing hepatisation and copious effusion into the pleura of sero-purulent fluid. The patient had been an out-door patient at a medical institution up to within a few days of his death; and he came under my care when it was too late to adopt treatment with any hope of a favourable result. This case was published in the *Medical Gazette*.[1]

CASE II. This was a boy, six years old. The symptoms led me to believe that a moderate amount of inflammation of the pericardium had taken place. On the fifth day of an attack of scarlet fever, the patient was seized with severe pain in the region of the heart, and with violent palpitation. A small bleeding afforded great relief; and the patient recovered. Pains in the joints and anasarca followed. Recovery took place; but the impulse of the heart was long after observed to be abnormally great.[2]

CASE III. A girl, ten years of age, largely made, was seized with acute rheumatism. She had had a similar attack about a year before; for which I treated her, but without venesection. The heart did not become implicated. On this occasion, she did not apply to me for several days after the commencement of the attack; and she had not been seen above once by a medical attendant. On my first examination, the "to and fro" rubbing sound was distinctly heard, and a loud sawing systolic sound, strongest at the apex of the heart, was readily perceived. Under local bleeding, the use of mercury, and quietude, the disease subsided, and the rubbing sound died away. The sawing sound was heard unimpaired while she remained under treatment, which she did for some months; and the heart's impulse remained greatly increased at the period of the last examination.

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[1] Medical Gazette, February 1845.

[2] Ibid.

It is somewhat remarkable, and to me it appears worthy of notice here, that these three examples of inflammation of the heart, or of a part of it, comprise, with the exception of one or two doubtful ones, all the instances of that disease which I find recorded in my case-books for the last ten years, among some thousand cases of acute disease, including many examples of acute rheumatism. Minor and more insidious attacks may doubtless have escaped my observation, and have grown with time into greater importance, after having passed from under my inspection. It is a matter of uncertainty with me, whether I should refer one very interesting case of disease of the heart in an infant (to be related at a later period) to inflammatory action, or to a rupture or lesion of a valve or valves.

With respect to acute rheumatism, the results of my experience are certainly very encouraging. The example I have selected above is the only one which I have found complicating rheumatism, although my attention was early drawn to the risk of the combination, from having been myself a severe and repeated sufferer from the latter disease in my youth. In the case I have recorded, it is related that the patient was very ill attended to, and that she was in the habit of going out into the open air while suffering rheumatic disease. Under proper care, she had passed through as severe an attack a year before, without any implication whatever of the heart. It is simply to confinement to bed and to a comfortable room, to the avoidance of cold, and to ordinary and reasonable treatment, rather than to the peculiar efficacy of the mode of treatment adopted, that I ascribe this important result. I may, once for all, observe, that the treatment which I have adopted in acute rheumatism, has been, for the most part, the exhibition of alkaline purgatives, and calomel and opium; when the disease has been obstinately located, with pain and swelling and heat, the application of a few leeches; and when the circulation has been persistently and greatly excited, with flushed face, head-ache, and full strong pulse, in the young and middle-aged, the abstraction of a few ounces of blood from the arm. Few things, in the treatment of rheumatism, appear to me to be more conducive to immunity from cardiac complication, than strict and constant confinement to bed. So important do I consider this measure, that I always inform my patients that it is a remedial agency, and not merely a mode of rest. It tends, with its hot moist atmosphere, to the object in view, by conducing very effectually to a free action of the cutaneous excretories: it brings the blood, and its noxious contents, to the surface; it derives from internal organs, and when there is a constricted condition of the internal secreting surfaces, as those of the bowels, kidney, and lungs, by a sympathetic influence, it goes far, in many cases, to effect a salutary relaxation. In treating cases of scarlet fever, however mild, I invariably order confinement to bed, with the view of preventing any implication of the kidney, heart, or other organ. Were this practice universally adopted, fewer examples of dropsy and other complications would be observed. This appears, however, so obvious, that were it not that an able systematic writer, of great influence in this country, has stated that confinement to the house is all that is requisite for the more mild form of scarlet fever, the subject would not have been at all dwelt upon.

II. FUNCTIONAL DISEASES OF THE HEART.

It is not my intention to give a detailed account of the cases of functional disease of the heart which have come under my care, but to select for comment some of the more interesting points in their history, and to furnish some statistical results.

The cases of functional disease or disorder which have occurred to me may be divided into two classes: A. Those of increased action; B. Those of defective action.

A. Increased action. Cases of this kind have been numerous.

Causes. The fifteenth year has been the lowest, and the sixtieth the highest age, at which simple over-action of the heart has been observed. Most patients were between the eighteenth and the thirtieth year. Females suffered more than males, in the proportion of two to one. Season appeared to have little influence in these cases; this differs from what was observed in the case of defective action. Climate was obviously operative in one example. The relaxing climate of India had induced palpitation of the heart in a young lady. Excessive reading for many hours during the day and night induced extraordinary over-action with debility. Anxiety of mind connected with business was the precursor of the attack in several instances. Fear was the exciting cause in one case. An elderly lady was affected with violent palpitation in consequence of apprehension during the late threatenings of the Chartists. Dissipation produced the disease in two instances. A young man "was out for some days" dancing and drinking without interruption. His attack lasted some weeks. A young woman unfortunately addicted to the habitual use of spirits in excess, was the subject of long continued palpitation of the heart, simulating organic disease. Excessive lactation was an exciting cause. A lady, desirous of delaying conception, nursed her child for fifteen months, and thereby induced syncope, followed by obstinate and alarming palpitation of the heart.

ANTECEDENT AND CONCURRENT DISEASES. The nervous constitution was extremely active and sensitive in a large proportion of cases. One young woman was affected with chorea, combined with very partial hæmoptysis. Two patients suffered from hypochondriasis: which in one instance was combined with extreme activity of brain, denoted by rapid speech and rapid change of subject during conversation. Hæmaturia had taken place in two examples; in one the hæmorrhage occurred after a dose of turpentine, in the other under circumstances denoting some temporary disorder of the kidney. Anæmia with venous murmur was found in one example. Aortic murmur was heard in two cases.

SYMPTOMS. These were much the same in all the examples of over-action. There were unusually rapid contractions of the heart, with inordinate beating against the ribs and sternum, shaking the entire thorax. In some cases the contractions of the auricles could be felt by the hand, and a few of the patients mentioned that unusual movements could be felt as high as the third and second ribs; which has led me to believe that in some instances the aorta and pulmonary arteries become the seat of inordinate mobility. A sense of distress was felt in the cardiac region, causing in the mind, at first, a considerable amount of alarm. In almost every case flatus distended the stomach; and in a few, a small quantity passing up into the œsophagus, sometimes by dint of exertion of the patient, was discharged, or, as frequently happened, greatly to the distress of the patient and to the impediment of the heart, it was arrested midway, and held by spasm above and below, and formed a small but tightly distended, and, as it were, solid bag of air. The amount of air generated in the stomach was in the case of some of the patients exceedingly great. One gentleman would for hours, with effort, belch up a large volume of gas every two or three minutes. The stomach and lower part of the œsophagus would thus find relief, but only for a minute, as the gas was immediately replaced by more. So great was the quantity of air thus generated and discharged, that it was somewhat difficult to understand how the contents of the stomach, small in quantity as they were, could produce so much air, even under circumstances the most favourable to fermentation. The over-activity of the heart, perhaps, by monopolising power, and leaving less at the disposal of the digesting organ, and the anxiety of mind, by a depressing influence communicated to the stomach, contributed much to this most distressing symptom. It was the remark of some, that if they could only get rid of the air in the stomach, they would soon be all right. This much has been said on this point, partly with a view to a certain mode of relief to be suggested at a later part of this communication. The pulse was almost without exception feeble, jerking, and small: rapidity was a constant feature. The pulse at the right wrist in one patient became imperceptible, on the assumption of the erect or even the sitting posture; the left was very feeble, yet was to be felt. The horizontal position was necessary, even during violent palpitation, to preserve the patient from an overwhelming sense of faintness. A sense of sinking and faintness was a frequent attendant, and a minor form of trembling seized the patient. Sometimes the face was pallid, and soon after greatly flushed. The bowels were little affected. The urine, on the other hand, was signally modified. During paroxysms of palpitation, and immediately after, the urine was abundant or excessive, almost colourless, and of very low specific gravity. The gentleman who suffered so much with flatus passed urine showing no appreciable weight above that of pure water, at the rate of 5 oz. in ten minutes, during some hours. It had no taste, but had a slight odour resembling beef tea. It threw down phosphates freely on the addition of liquor ammoniæ. This urine would be succeeded next day by scanty, deep sherry-coloured urine, of high specific gravity, above 1·020. The urine in one example was, as it were, brilliantly illuminated by a profusion of crystals of the triple phosphate.

Physical Signs. These presented little remarkable. The sounds of the heart were short, smart, and loud; the first resembling the French "eu", and the second "up" pronounced hard. The impulse was greatly increased, sometimes succussing the whole or part of the thorax. Over the second rib and corresponding part of the sternum in the case of the gentleman who had suffered hypochondriasis and hæmaturia, a distinct humming sound, synchronous with the systole of the heart, was unequivocally made out, proceeding obviously from the aorta, probably in a state of moderate orgasm. No venous murmur was to be heard in the neck. It is a curious circumstance, and one which reflects light on that just related, that I was enabled to discover the same humming sound in the same parts in the sister of the patient. She too suffered from palpitation of the heart unconnected with organic disease. Her health, never robust, had recently suffered from nursing her infant.

The circumstances which aggravated the disease were exertion, emotion of the mind, full meals, and stimulating drinks. In more than one instance, wine and spirits proved very injurious. Bread in one case caused such an enormous quantity of flatus, as to be very hurtful.

Treatment. The treatment found most efficacious was the removal of exciting causes as much as possible, quietude, and sustaining the strength without causing excitement. Animal food in moderate quantity was found most suitable. When flatus was annoying, this was materially abated by giving the food cold, such as cold jelly, or cold beef tea, with only a small allowance of bread. The medicines most useful in obviating excessive action were hyoscyamus and hops, given alone or conjoined, in tincture or in extract. The bowels, when requiring assistance, were advantageously moved by means of the compound rhubarb pill, with or without a grain or half a grain of camphor. After the disease had subsided, benefit accrued to the general health from the use of vegetable tonics, followed at a later period by chalybeates. Under this treatment, with additions modified to meet the specialities of particular cases, all the patients did well, and none in the end gave any reason to fear the actual commencement of organic alteration.

The horizontal posture was found in more cases than one to make the patient more tolerant of the heart's excessive palpitation, and appeared to favour its subsidence. This posture, however, was sometimes eagerly exchanged for the sitting position during flatulent distress and during efforts to discharge air through the œsophagus. It appears to me that this relief from the horizontal posture was procured by a reduction of the labour or effort required to be made by the heart, secured by the more ready passage of the blood along a horizontal, than upwards through a vertical tube.

B. Defective action. Several examples of defective action of the heart have come under my notice, but they have presented very few points of interest. The defective action was manifested in weak and fewer contractions of the heart, for the most part accompanied by a greater or less degree of faintness or sinking. The heart's contractions would occasionally cease for a few seconds, causing to the patient a sense of stoppage and fulness at the heart. The sounds of the heart were low but clear. The pulse was of good size, soft, compressible, and often intermittent. Flatus in the stomach, and pallidity of face, were common.

Causes. Fatigue was a very common cause of defective action. Anxiety of mind and sudden emotion have for some moments appeared to suspend the heart's action. Adults only suffered; the sexes in much the same proportion. The heat of summer and autumn caused the attack in several patients. In the summer of 1846, when the heat was very great, some bad cases occurred.

Treatment. Cold, ammonia and spirits were found to give relief at first. This was advantageously followed by tonics. Rest from labour was found necessary; and, in some instances, great advantage followed removal into the country, and exposure to the cool breeze, when that could be secured. The horizontal posture was so serviceable, that it was almost involuntarily assumed by the sufferers.

Besides the idiopathic cases of defective action of the heart, I have found in several examples of disease of the brain and medulla spinalis, indicating softening and inaction of these parts, a very decided and very unequivocal debility of the heart. This is somewhat interesting; and I therefore shall proceed to notice one or two examples.

A young married lady consulted me about eight years ago on account of a constant tremor of the eyelids of one eye, and twitching of one angle of the mouth, together with pain at the coccyx on sitting down or on attempting to rise. Rapid and silly talking suggested a weakly brain. The general health was excellent, the face was florid, the body altogether in a state of embonpoint, but the pulse was remarkably feeble and compressible. Disease of the brain and medulla spinalis was suspected. The tremor and twitchings passed off, but reduced sensation soon after occurred, and the patient is now little above the level of an idiot, and can with difficulty stand or creep round a table. The action of the heart is exceedingly feeble; the sounds are low. The pulse ranges about sixty, and is remarkable for want of force.

A gentleman lately called to consult me for dimness of sight and headache. He was drowsy and very fat. The heart's action was remarkably feeble for such a man; and though he was evidently of a full habit, and accustomed to a full meal and little work, I on this account avoided more depletion than I believed necessary to save him from an attack of apoplexy. He improved greatly, but some months afterwards he was seized with a fit, and fell down. A great deal of brandy was given by the attendant who was called in, and the disease was said to be something of the nature of syncope. Good living was recommended; but the fits have since recurred several times, and they are reported by the attendant in the country to be allied to epilepsy. The patient's mind is weakened, and he is unable to perform the duties of his station.

The same debility of heart's action was remarked at the very commencement of an insidious illness which terminated, some months ago, in the death of the patient in a lunatic asylum. Silence observed to his newly-married wife, and debility, were the first indications of disease. His articulation became slow and faltering. Insanity, approaching idiotcy, was soon after established. The patient was a gentleman of forty years of age, and previously in excellent health. The debility of heart and pulse continued to the last.

III. STRUCTURAL DISEASE OF THE HEART.

Forty-two examples of organic disease of the heart, of which some account is now to be given, include nearly all the cases which have come under my notice for some years. They may therefore be taken as a fair specimen of heart-disease in a physician's practice, and of what the young physician may expect to meet. With only three exceptions, all the sufferers came under my own care. Most of them remained under treatment for some time, and most of the deaths occurred under my own notice. Some of the patients are still living, and under treatment. In these instances, the present age has been given, and the duration of the disease calculated up to this time. In other examples, these points are given at the time of patients coming under treatment. The three patients, not under my treatment, were Nos. 31, 32, and 33, in the general table. No. 33 had been under the care of Dr. Budd, in King's College Hospital. He died in a private house, and I was requested to be present at the examination of the body. The particulars of the patient's symptoms, etc., were taken from the Hospital Book, by the kind permission of Dr. Budd. No. 32 was the patient of a student connected with the Northern Dispensary: I examined the heart and great vessels. The particulars, on other points, are derived from the student. No. 31 was a patient of Dr. Willis, whom I assisted at the autopsy. A considerable proportion of these cases were seen by other physicians, either before or during my superintendence

In the arrangement of my materials, I have, for greater conciseness as well as for more ready comparison, placed many points in a general table. Facts, of little importance in themselves, become of great import in relation to a number of examples of disease. Thus, to know that dissipation and exposure were noted in one fatal case is comparatively of little consequence; but that *all* the patients, of whom this was recorded, ultimately died, is a collective fact of great significance, and is practically suggestive.

Some special points of interest, in different examples, were observed, and are thought worthy of record. These, as well as some observations on the pathology and treatment of organic disease of the heart, require separate notice.

TABLE SHOWING THE AGES OF THE ENTIRE PATIENTS.

Years.	3	9	10	17	18	20	22	25	26	32	34	36	40	43	47
No. Cases.	1	1	2	1	2	2	1	1	3	1	1	2	5	2	1

Years.	49	50	55	57	59	60	61	62	65	72	73	75	80
No. Cases.	2	1	1	1	1	1	2	2	1	1	1	1	1

This proves that organic alteration of the heart is not unfrequently met with in early life. Nine cases occurred at and under twenty years of age. Of the forty-two patients, twenty-two were males, and twenty females.

Of the forty-two cases of organic disease of the heart, seventeen terminated fatally. Of these, thirteen were males, and four were females.

TABLE SHOWING AGES AT WHICH DEATH OCCURRED.

Years	17	34	35	36	40	47	49	59	61	62	65	73	75	80
No. Cases.	1	1	1	1	2	1	2	1	1	2	1	1	1	1

Total........ 17

TABLE SHOWING THE CHARACTER OF LIFE OF 42 PATIENTS.

Character of Life.	Exposure.	Exposure and Dissipation.	Dissipation	Violent Exertions.	Viol. Exert. and Dissip.	Dissolute.	Sedentary.	Comfortable.	Destitute.
No. Cases.	8	4	2	6	1	1	1	18	1

Of the eight patients, whose lives were exposed, three suffered simply from hypertrophy; one from hypertrophy with disease of mitral valve; one from hypertrophy, with calcareous deposit in aortic and mitral valves, with great thickening of the endocardium; one from hypertrophy and dilatation; and two simply from dilatation. Three died, and five were relieved. Of the four patients, whose lives were marked by exposure and dissipation, two suffered simply from hypertrophy; one from hypertrophy, and calcareous deposit in the aortic valves; and one from hypertrophy, dilatation, and mitral valve disease. All four died. Of the two patients who come under the head of dissipation, one suffered from dilatation, and soft fatty attenuated condition of heart; the other, from hypertrophy and dilatation. Both died. Of the six patients, whose life had been marked by violent exertions, four died, and two were relieved. Aneurism of the aorta accompanied the disease of the heart in one of the examples. The patient, whose life was one of dissipation and violent exertions, was relieved. The form of his disease was hypertrophy. The dissolute patient suffered from hypertrophy, with steatomatous deposit in aorta etc. He died. The sedentary patient's affection was hypertrophy and dilatation, and it was relieved.

Of the eighteen patients, the chief characteristic of whose life was comfort, fourteen were relieved, and three died; in one case no result is found noted. The destitute patient was relieved.

From these facts it appears, that the most unfavourable circumstances in the mode of life are dissipation, and dissipation conjoined with exposure.

SYMPTOMS. The form of the disease varied so frequently, that it is difficult to give a distinct, and, at the same time, a concise summary of it. Reference to each case is therefore recommended. The same remark and recommendation apply to the physical signs and symptoms.

The pulse, for the most part, fell greatly in force below the force of the heart's impulse. It was almost invariably very weak and intermittent in mitral valve disease. In two examples (Nos. 12 and 14), those of two girls, aged ten and eighteen years, the pulse was regular; and this was probably owing to greater natural vigour at that time of life. The intermittent and irregular pulse has been observed to become regular under unusual excitement of the circulation; and, on the other hand, the nearly regular pulse has become extremely irregular and intermittent under the increased excitement of the heart.

ANTECEDENT DISEASE. Certain morbid conditions co-existed with, or occurred antecedently to, the accession of disease of the heart, as far as could be ascertained, in thirty-one of the forty-two patients. In respect to eleven, nothing was made out. Seven had suffered from rheumatism on one or more occasions; one from that disease, and distortion of the thorax; five from inflammation in the chest; two from metritis and white-leg following parturition; one from miscarriage, causing great debility; two from distortions of the thorax; one from a contusion of the chest from a kick from a horse; one from gout with deposit; one from scarlet fever; one from colica pictonum; one from laryngismus stridulus; one from fever in India; one from bad health from infancy; one from general weakness; one from gonorrhœa, with hernia humoralis; one from bad development of skeleton; one from bad development and small-pox; one from abscesses in loins; and one from rapid and great distortion of skeleton.

Rheumatism maintains its character as a frequent cause; and the exanthematous diseases exhibit the same relation, though certainly to a much smaller extent. Small-pox and scarlet-fever are found as antecedent diseases, under circumstances suggesting their operation as causes. I believe that rheumatism and some febrile diseases frequently produce disease of the heart from a culpable neglect of moderate precaution. One of the patients came to the Northern Dispensary, suffering from acute rheumatism and pericarditis, with "to and fro sound", and loud internal murmur. A little boy, who died under my care of pericarditis with sero-purulent effusion consequent upon scarlet-fever, had been carried as an out-patient to an hospital till within a few days of his death. Laryngismus stridulus evidently induced the disease in a child when only six months old. Valvular disease was discovered during his convalescence. Palpitation had been remarked occasionally, while the breath was suspended, which it often was for about a minute as completely as if the glottis had been entirely closed by the hand. It was thought at first that the valves of the pulmonary artery had been lacerated by accumulation of blood in the vessel; but the integrity of the patient's respiration, and freedom from blueness, with the extraordinary loudness of the valvular sound at the present time, three years from the date of his illness, rather refer the lesion to the aortic valves; which probably during the disturbance of the circulation and respiration produced by the fits, which were accompanied, moreover, by severe general convulsions, became the seat of inflammatory action, ending in effusion of lymph, and in permanent alteration of the valves. Distortion of the thorax, cramping the heart and impeding its action, was obviously instrumental in the production of the disease in a few examples. Gymnastic exercises were apparently operative to the same end in the case of a young man. Metritis, with swelled leg, was antecedent in two cases; and it is not unlikely that the inflammation of the veins was propagated to the heart, and resulted in the morbid alteration which there took place. Rapid and very great distortion of the spine and thorax certainly evoked a murmur, if it did not *cause* valvular disease, and probably contributed to the alteration of the walls of the heart. "Inflammation in the chest" was antecedent in some instances; and it is very probable that the heart became implicated in the more general affection, and ultimately led to the morbid alteration observed. In a few examples no cause could be satisfactorily made out. It has often happened, in regard to disease of the heart, as well as in regard to disease generally, that I have failed to obtain an explanation of its occurrence; and it has always appeared to me more likely to advance our knowledge to confess this, than, on slight and fallacious grounds, to adopt this or that as its ascertained cause.

CLASSIFICATION OF THE CASES. The forty-two cases of organic disease of the heart, which have been tabulated, present many points for comparison, each of which might serve as the basis of classification. But, as this is a practical communication, the point which I have selected as the ground of division of these cases, is one of obvious practical utility, viz., the limitation of the disease to the heart itself, or the implication of other organs, as indicated by the destruction of the general health, the occurrence of dropsy, of reiterated hæmorrhage, or other grave contingencies. This classification will, in fact, be one, first, of twenty cases, confined, as far as has yet been ascertained from their history, to the heart itself; and, secondly, of twenty-two with grave and probably incurable complications of distant organs. Perhaps it would not be inaccurate to say, that while the one group has attained the length of the second stage, the other has proceeded no farther than the first.

In practice, such an arrangement of examples of diseases of the heart, though it boasts nothing whatever of the distinctions of morbid anatomy, and demands no nice power of minute diagnosis, attainable only by long practice, is, nevertheless, calculated to subserve the great end of medical science, perhaps more than any other. It is not my object to disparage the divisions founded on the nature of the morbid alterations, or on the localisation of the disease. Such divisions as those of hypertrophy, of dilatation, and valvular obstruction, are doubtless of vast interest and importance; but they are so much more in a pathological than in a therapeutic point of view.

That the division I have here made is superior, for the direction of the treatment, to that founded on the nature of the morbid alteration, will appear from a reference to the cases. The morbid changes usually made the grounds of division, are found almost equally in the two groups of cases. Thus we find hypertrophy alike in the very formidable and in the merely local examples. We find valvular disease with abnormal sounds, in several examples of mere local disease, though of long duration, as well as in the cases involving serious complications in other parts of the body.

To know that the heart is enlarged, and that its walls are thickened or attenuated, is doubtless important and interesting; but, if the physician makes this the chief object of his search, and believes that, in diagnosing correctly between thickening and thinning, he has made out the most important facts of the case, he is greatly deceived, and in practice he will assuredly fail to be as useful as he might be. These conditions, in themselves, afford very indifferent guides in practice; and, indeed, are to be found in examples of disease requiring greatly diversified treatment. I believe that, in thus commenting upon this classification, I may be useful to the student and young physician, by inducing them to regard, at least in practice, rather the broad and obvious requirements of disease, as known by its limitation to the heart, or by its distant implications, than the nature or extent of the morbid alteration in the thickness of the heart's walls,—important though that be, particularly in a pathological point of view.

This classification is, like every other, embarrassed with its drawbacks. The case which is to day complicated with hæmorrhage, or, it may be, dropsy, may, ere long, under judicious treatment, be deprived of these adjuncts; and the disease, limited at present to the heart, may ere long involve distant organs. Still, though the arrangement of the case must be changed, we have the guides for treatment.

The presence of *valvular disease* forms a good pathological ground for classification. It is, for the most part, readily detected by the presence of abnormal sounds. Of the forty-two cases, thirteen gave evidence of valvular disease by abnormal bruits. Abnormal sounds were heard in six of the local examples, viz., cases 1, 11, 12, 13, 14, and 16; and in seven of the cases accompanied with complications, viz., cases 22, 23, 26, 31, 33, 35, and 37. But valvular disease is a sign of little value, both in respect of treatment and prognosis. We find it alike in the slightest and the most severe and advanced examples of disease; and the auscultatory signs of its presence are not always to be heard. Valvular sounds, which had at an early period been well made out, would at a later period become altogether, or for a time, inaudible. This probably arose from reduced force of the heart's action no longer being sufficient to propel the blood with sufficient force, and not by any means, as the over-sanguine might conclude, from the removal of the obstructing parts under the influence of treatment. The intensity of the valvular murmur did not always correspond with the amount of disease of the heart, or with the importance of the valvular alteration. The vigour of the heart's action, as well as youth and good general health, seemed to contribute largely to the intensity: the sounds in the limited or local examples were of the loudest. On the other hand, valvular disease, of great importance, connected with very great alteration of the heart, was present in one example, without any murmur having been heard at any time, though diligently sought for.

Any grouping of the cases on the basis of the thickness of the walls of the heart, will here prove of very little value; the alteration in this particular being much the same in examples requiring very different treatment.

An important division of cases of organic alteration of the heart would be one founded on the healthy firm character, or the disorganized, soft, broken-down alteration of the walls of the heart. But, in practice, it is difficult to diagnose these conditions by physical signs, and we are compelled to have recourse to symptoms, and the general condition of the body. Now, for the most part, the healthy firm heart is found only in the more limited cases, and the disorganized heart is seen only in the complicated examples; so that the division first noticed in this paper will practically be also one of,—first, firm and vigorous structure; and second, of disorganised, soft, inefficient tissue, this being, in my opinion, the most formidable and important alteration, and the prevention and arrest of which is a main indication. So very generally is the heart found firm, or moderately firm, and vigorous, in those examples of disease which still remain free from general breaking up of the health, hæmorrhage, and dropsy, and so commonly is the heart found softened and disorganised in its muscular parts, in those cases marked by these grave contingencies, that I am disposed, in a general way, to regard the first condition as the first stage, and the second condition as the second stage of the same disease; using the word *disease* in a wide and comprehensive sense, and acknowledging it to display manifold varieties, as well as to possess a certain unity of character.

A. Local Cases. The ages of the patients, whose disease was chiefly local, are arranged in the following table in quinquennial periods.

Ages.	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	80
No. of Cases.	1	3	0	4	2	3	1	1	2	0	0	0	1	0	1	1

The average age of the patients is about thirty years. With regard to the sexes, eleven were females, and nine were males. The greater proportion of females, in this list, may possibly be explained on the supposition that the greater care they take of their health, their more protected mode of life, and their greater freedom from hard labour and dissipation, contributed greatly to arrest the development of disease beyond the primarily suffering organ. The duration of the disease varied from two months to twenty years; and as the period could not be accurately determined in some cases, it may have lasted even longer. This shews, that organic disease of the heart may not only permit the patient to survive many years, but that without hæmorrhage, dropsy, or permanent damage to the general health; in short, with very limited suffering. The observations of Dr. C. J. B. Williams (London Journal of Medicine, April and May 1850) and Dr. R. H. Semple (*Ibid.* November 1850) tend to shew that heart-disease is, in itself, not so incompatible with long life as is often supposed. The interesting cases, recorded by the latter gentleman, prove still more: they shew that patients may attain old age, with a considerable degree of comfort, even with long-standing apparently formidable valvular disease.

The form of alteration of the walls of the heart, in ten examples, was hypertrophy; in ten, it was hypertrophy combined with dilatation.

Of this group of twenty cases, six were marked by abnormal valvular sounds.

The results of these cases were exceedingly satisfactory. Relief was afforded in every case. In some the benefit was great, and promised to be lasting. Death occurred in one example only, that of an octogenarian; and this proceeded more from great and rapid distortion of the body, than from disease of the heart.

B. Complicated Cases. The ages of the patients whose disease extended beyond the primarily affected organ, whose general health was materially injured, and who suffered from dropsy or hæmorrhage, may be classified as under, in quinquennial periods.

Ages.	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75
No. of Cases.	1	0	0	1	6	0	4	1	3	4	0	2

The average age was about fifty years. This is much higher than the average age of the patients suffering only from local disease, viz., thirty years; and is what might have been anticipated, because the progress of years is calculated to convert local into general and complicated disease, and because disease of the heart, at an advanced age, is likely to meet with less resistance than in comparative youth, when the powers of life are yet abundant, and the tissues are firmer, and possessed of more elasticity.

Of the twenty-two patients suffering from hæmorrhage, or dropsy, or both, thirteen were males, and nine were females. Thus males suffered more than females, which is the reverse of what was observed in respect to merely local disease; eleven females, and nine males, making up the number of patients more lightly afflicted.

TABLE SHEWING DURATION OF COMPLICATED CASES.

Duration.	Some Months.	2 Yrs.	3 Yrs.	7 Yrs.	8 Yrs.	20 Yrs.	27 Yrs.	40 Yrs.	Some Years.	Many Years.
No. Cases.	3	1	3	1	1	1	1	1	6	4

The duration of each case, with the exception of a few still under treatment, is given only up to the time when it first came under my notice. Some of the patients lived for some years after. Care was taken to obtain the most correct information on this as on every other point; and it may be regarded, if not as absolutely precise, still as a very near approach to it. With respect to the instances of long duration, viz., twenty, twenty-seven, and forty years, there is no doubt whatever of the accuracy of the information. The patients were all intelligent and trustworthy men. One was the father of a medical friend, not likely to be deceived; and his testimony was corroborated by examination after death. The gentleman, who had been ill forty years, was a particularly intelligent Scotchman, till within a few months of his death serving with his regiment in the West Indies. He distinctly assured me that he had suffered from disease of the heart for forty years, and that the extraordinary palpitation, which I have endeavoured to describe, was wont to attack him during the whole of that long series of years.

The form of alteration of the walls of the heart, in the twenty-two complicated cases, is seen in the subjoined table.

Alteration.	Hypertrophy.	Dilatation.	Hypert. & Dilat.	Uncertain.
No. Cases.	11	3	7	1

In seven of the twenty-two cases, valvular or abnormal bruits were made out. This is rather more frequent than in the more limited cases; in only six of which were abnormal sounds heard. The results, as might be anticipated, were, in this group of cases, greatly less satisfactory than in the other. Sixteen of the cases terminated fatally: six of the patients were relieved.

Concurrent Diseases. Congestion was the first implication of other organs; and in the examples before us it was, almost without exception, passive. The head was congested in some instances, from the obstructed venous circulation. In only one or two was the congestion at all of an active character, and then it arose more from the agitated condition of the body, and the impurity of the blood, than from any undue violence with which the diseased heart discharged the current of blood. A very anæmic condition of the system did not prevent a patient (No. 36) from suffering much from this complication.

Congestion of the kidney has obviously been instrumental in the production of dropsy. It has destroyed the tone of the organ, and ultimately so injured its vitality as greatly to interfere with its due secretion. This has received much countenance, from the urine becoming more abundant when hæmorrhage has taken place.

Of the forty-two patients, eighteen suffered from head affections, embracing various forms of disease, including active and passive congestion, convulsions, coma, delirium, and headache.

Twenty patients were affected with disease of the lungs and bronchi. Ten suffered from congestion of lungs; one from congestion of bronchi; one from emphysema and black, old tubercles; one from emphysema and chronic bronchitis; two from chronic bronchitis; one from œdema; one from hepatization; one from probable œdema; one from displacement of lung by enlarged liver; one from tubercles and cavities; one from tubercles; one from emphysema, œdema, congestion, and chronic bronchitis.

Of the twenty-two patients, thirteen suffered from hæmorrhage in one form or another. Eight suffered from hæmoptysis, one from hæmoptysis, hæmatemesis and melæna, two from melæna, one from hæmorrhage from bowels, and one from hæmorrhage from bowels and hæmoptysis. In case No. 21, it was remarked that the urine was albuminous until melæna occurred, when the albumen disappeared from the urine; but as soon as the melæna ceased, the urine again became albuminous.

Spontaneous hæmorrhage has afforded great and immediate, if not very lasting benefit to some of the patients. It has done this by relieving congestion, and thus withdrawing one of the obstacles to free secretion. This has been observed even when the blood has been scanty, or highly diluted. Perhaps the benefit from this natural or spontaneous bleeding may not be without a wholesome suggestion to those who, ever eager to adopt every novel doctrine, though opposed to the well tested experience of ages, on all occasions, to the detriment of the sick, and to the injury of a noble calling, repudiate the assistance of the now too much disparaged lancet.

TABLE SHOWING THE RELATIONS OF DROPSY WITH HÆMORRHAGE, ETC.

No. as in general able.	Dropsy.	Hæmorrhage.	Liver.	Kidneys.	Result.
21	Œdema of feet.	Hæmoptysis, hæmatem., melæna.	No disease.	Kidneys only rather small, albuminuria.	Death.
22	Ascites, œdema of feet.	None.	Great hydatid tumour.	No disease.	Death.
23	Ascites, anasarca of legs.	None.	Enlargement.	No disease.	Death.
24	Œdema of feet.	Hæmoptysis.	No disease.	No disease.	Relief.
25	Anasarca of legs.	Melæna.	No disease.	No disease.	Death.
26	Ascites to great extent; anasarca of legs & hands.	None.	Cirrhose.	No disease.	Death.
27	None.	Melæna.	No disease.	No disease.	Relieved.
28	None.	Slight hæmoptysis.	No disease.	No disease.	Relieved.
29	Ascites to great extent, hydrothorax, hydropericardium, œdema of lungs; anasarca of legs.	None.	Cirrhose.	No disease.	Death.
30	Great anas. of legs; œd. of lungs.	Hæmorrhage from bowels.	No disease made out.	No disease made out.	Death.
31	Hydrothorax, ascites, anas. legs.	None.	Cirrhose to great extent.	No disease.	Death.
32	None.	None.	Cirrhose.	Bright's disease in first stage.	Death.
33	Œdema of face.	Hæmoptysis, aneu. of aorta.	No disease.	No disease.	Death.
34	Ascites, œdema of feet.	None.	No disease made out.	No disease.	Relief.
35	Hydrothorax, ascites.	None.	Diseased.	No disease recorded.	Death.
36	Ascites, anasarca general.	From bowels, hæmoptysis.	Great enlargement.	No disease.	Death.
37	Anasarca, great.	None.	No disease.	No disease made out, albuminu. 2 or 3 occasions.	Death.
38	None.	Hæmoptysis.	No disease.	No disease.	Much rel.
39	Hydrothorax, anasarca of legs.	None.	Congestion.	Cyst containing tubercular matt.	Death.
40	None.	Hæmoptysis.	None made out	No disease.	Relieved.
41	Hydrothorax, anasarca of legs.	None.	No disease.	No disease.	Death.
42	Œdema of feet.	None.	No disease.	No disease.	Death.

Dropsy was intimately connected with the soft, flabby, inefficient, disorganised heart. There was reason to believe that dropsy was the effect; but there is ground also to believe that the general effusion of serous fluid into the tissues again materially aided the further progress of the disorganisation of the heart.

Of the twenty-two patients in the second division of the table, seventeen suffered from dropsy in one form or another; three from œdema of the feet;[1] two from œdema of feet and ascites; one from ascites and anasarca of legs; two from anasarca of legs; one from ascites and anasarca of hands and legs; one from anasarca of legs, ascites, hydrothorax, and hydropericardium; one from anasarca of legs, hydrothorax, and ascites; one from œdema of face; one from hydrothorax and ascites; one from ascites and anasarca; one from anasarca; and two from hydrothorax and anasarca of legs.

From the above table it appears that out of seventeen cases in which dropsy occurred, fifteen terminated fatally. In some cases, the amount of dropsy was slight, and the effusion was confined to a part. In others, the amount was great, and different parts formed its seats. In five cases, hydrothorax occurred; in one, hydropericardium. The effusion was confined to the face in the case conjoined with aneurism of the ascending aorta. Ascites took place in eight cases; and it is remarkable that in six of them there was found organic disease of the liver. While this teaches that ascites may be looked for more frequently where there is organic disease of the liver, it also suggests the practical precaution, when ascites occurs, of looking beyond the liver, and of ascertaining the condition of the heart.

Besides the facts given in the tables, there are a few connected with these cases which are too important to be altogether passed over.

One of the first facts of importance which suggests itself to my mind, is the frequency in which I found that disease of the heart had not been made out until a very late period, in some examples only a very short time before death, although there was good ground to believe that the disease had been of considerable duration. In some instances, this has arisen from inattention to obvious evidence; in others, from the absence of some of the more common indications, such as palpitation, pain or oppression, particularly in the region of the heart, or from the impulse and sounds of the heart being in some measure obscured by effusion in the lung or pleura, or by emphysema. In some examples, it is not unlikely that it arose from a current but fallacious idea that there must necessarily be heard, in organic disease, abnormal bruits and marked alteration of the sounds of the heart; and that when these are not made out, symptoms alone, such as palpitation, blue face, dyspnœa, dilated veins, etc., are to go for little or nothing. One gentleman (No. 39 in the general table) had the sounds and impulse of heart so masked by emphysema and œdema of the lungs, together with much flatus in the stomach, that his disease, great as it was, was not made out by two of the oldest physicians in town, who had attended within a short time of his death. The feeling of the patient in respect to the stomach being the chief seat of disorder, may likewise be operative in leading to this error. A patient (No. 37 in the general table) spoke so confidently of his disease being merely "wind in the stomach", that I felt it my duty to inform him that it was much more serious; but he apparently treated my information on this point as unworthy of consideration.

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[1] One case of slight recent œdema of the feet in a patient aged 80, remains in the first table.

The anæmic venous murmur in the neck, which had been distinctly heard in case No. 36, before the jugular veins became greatly dilated, and the seat of regurgitation, on the occurrence of these conditions was no longer heard, although the blood continued fully as much diluted. This cessation was probably due to the subtraction of one of the necessary conditions for the production of the sound; viz., a certain amount of rapidity of current.

Diagnosis. The diagnosis in advanced organic disease is, for the most part, sufficiently easy; though, as we have seen, even great alteration may be marked by emphysema, œdema, or flatus. A careful examination of the impulse and the sounds, of the patient's narrative, and of his general condition, will leave little room for doubt. But it is otherwise in the commencement of those examples of disease, unproclaimed by valvular murmur, or by recent acute inflammation, and attended by no very obvious alteration of the impulse, sounds and rhythm of the heart, alteration in the colour of the blood, or dyspnœa, not referrible to disease of the lungs and bronchi themselves. The difficulty is indeed great, in such cases, to decide at one examination of the patient at the physician's house. I have generally found the heart, when only functionally affected, to be very agitated on the first visit of the patient, and to convey to the hand the feeling of an enlarged organ. It is well, under such circumstances, not to proceed at once to the examination, but cheerfully to divert the patient's mind, and to have a second, or even a third examination. If we still find the impulse beyond its normal force and boundaries, we are scarcely warranted in allowing humanity, or a regard for the patient's feelings, to lead us to assure him that there is no disease. Whenever disease, though moderate, has been diagnosed, I have deemed it my duty to inform the patient of it. A contrary course would have compromised his interest, by interfering with suitable and persistent treatment; and the risk of evil from apprehension has been avoided, by explaining that disease of the heart is manageable; that it is, for the most part, contrary to general opinion, not remarkable for its rapidity of course, or for the suddenness of its termination. After all, it is often more a matter of curiosity than of real importance to the patient, to decide whether the heart is or is not what is usually called organically altered; for we find the worst consequences, such as venous congestion, dropsy, and death itself, following very moderate change; while, on the other hand, persons have lived for many years with great alteration, both of valves and walls, without heart-disease having been even suspected, and have ultimately died of other affections, to reveal after death, for the first time, the true condition of the great central organ.[1] If there is, however, one condition that it is important to diagnose, it is the soft flabby inefficient heart: that is, of all other changes, the most important; and it signifies little whether or not it be conjoined with enlargement or valvular alteration. In this form of disease, the sounds are weak, and the pulse intermittent, irregular, and feeble. But the blue or pallid countenance, the continuous dyspnœa, the tendency to œdema, the general debility, and the softness and weakness of the voluntary muscles, will greatly assist the diagnosis. Amongst the first symptoms of disease of the heart I have found a moderate amount of pretty constant dyspnœa, with a sense of stoppage at the left nipple, followed by a knock. These symptoms have led, in some instances, to the diagnosis of heart-disease formerly unsuspected.

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[1] For an illustration of this fact, see Dr. Semple's paper on Diseases of the Heart, in the London Journal of Medicine for November 1850.

Prognosis. The prognosis, judging from the cases given in this paper, may be favourable when there is no very great narrowing of the outlets, when the heart is still possessed of tone, and when the patient is young and in fair general health, and when the disease is confined to the heart. Youth enables the suffering organ, for the most part, to maintain a suitable balance between increased obstruction to the propulsion of the blood, and the increased force demanded. The heart becomes larger and more powerful in its contractions. The prognosis is unfavourable when there is great obstruction or inefficiency of valve, permitting regurgitation into the veins, when passive congestion takes place in the viscera, and dropsy manifests itself. When the heart has become soft and flabby with very inefficient action, especially if conjoined with anæmia, there remains little or no prospect of lasting improvement. Persistent dropsy and repeated hæmorrhage argue a fatal termination. Old age and enfeebled health afford little resistance to the increased difficulties of the circulation. If the heart becomes larger, it is chiefly by dilatation and mechanical extension, aided by a soft expansile and atonic muscular structure, and marked by false movements, alike unfavourable to the currents of blood to the heart, and to the discharge of blood from it.

Treatment. In the treatment of those examples in the disease which was confined to the heart, the indications which were kept in view, were:—1st. The abatement of inflammatory action, even in the most mitigated forms, by the application of leeches, counter-irritation, and the usual measures. 2nd. The abatement of inordinate action, by the use of harmless sedatives, such as hyoscyamus, and conium, or lactucarium. When the action was great, and attended with pain, morphia was administered. When quieting was required at the same time that a tonic was admissible, hop was administered with great advantage: it was usual to continue its use for weeks, often in combination with a bitter infusion. When vigour was wanted, and there was no extreme irritability, iron was found to afford lasting advantage.

In the treatment of the more serious cases, those complicated with congestion, hæmorrhage, dropsy, etc., the objects of the treatment were more numerous.

A heart organically altered is not incapable of inflammatory action. It was therefore necessary, on some occasions, to adopt measures against this evil. But great care was taken not unnecessarily to tax the powers of the system.

When congestion occurred, the treatment consisted in gently soliciting the secretions of the part affected, if a secreting organ; if the head or lungs were affected, a few leeches, or the cupping glasses, were applied in the neighbourhood; and when circumstances would admit, mild purgatives were employed. The congestion of the brain, in one example, was so great in consequence of regurgitation, that, though the patient was anæmic, it was deemed necessary, in order to save him from an attack of apoplexy, to open a vein in the arm, and draw two or three ounces of blood. The result was satisfactory. The patient was immediately relieved from severe pain, and an almost delirious state; and no obvious increase of debility followed.

In these examples very violent palpitation occasionally occurs, causing pain, dyspnœa, and extreme anxiety. The stronger sedatives, such as morphia, are then demanded. The effect of morphia, under such circumstances, has been most gratifying; a quivering heart, with rapid and extremely small and irregular pulse, has within an hour been changed into a comparatively quiet and efficient organ, with a soft, full formed, calm pulse. Under such quieting treatment I have known even very marked regurgitation of the jugular veins to disappear; the venous blood finding a more ready passage through a better working engine. For constant use, to prevent inordinate over-action, the tincture of hop has proved of inestimable value.

Dropsy demanded much attention. When it depended on congestion from direct heart obstruction, the saline purgatives and diuretics were administered. When a slight stimulus was admissible, the spirit of nitrous ether was added. These means, for the most part, gave some relief. When dropsy depended on debility, as it did in some examples towards their fatal termination, the evil was met by the use of spirits of ether, in a little infusion of broom tea and squills, supported by the moderate employment of Hollands.

In those examples of dropsy dependent on visceral congestion, as not a few were, an attempt was made to remove this secondary condition. When the liver was obstructed, a few leeches were applied over it, and mercurials administered according to the resources of the patient. When the kidney was congested, little good followed the use of diuretics. When all other means failed to relieve pressing dropsical swelling, recourse was had to the formation of an artificial outlet in two cases, and with manifest advantage. One of these cases was ascites; the other, general anasarca. No evil whatever resulted. In the case of anasarca, small incisions were made along the legs, and the fluid trickled out for days, until the whole dropsical effusion was got rid of, much to the comfort of the patient. The adjoining integument was besmeared with some simple ointment, and the leg was enveloped in dry, soft, chamois leather, which imbibed the fluid as it escaped, and formed a bland warm application to the limb; a happy exchange for hard irritating linen cloths.

In dropsical effusion, extraordinary benefit has been observed to follow the use of mercury in some of these examples, as well as in other cases. When œdema of lungs has threatened, a few grains of blue pill, combined with squills, have afforded great relief to the respiration and much increased the flow of urine. When the whole catalogue of diuretics had in vain been tried, and scarcely an ounce of urine would be passed in twenty-four hours, with increasing effusion in the different cavities and in the cellular tissue, it has appeared desirable to restore the urinary secretion, even at some cost to the patient. Mercury under these circumstances has been administered, but with varied results. One circumstance commonly noticed has been the difficulty of affecting the gums; extraordinary quantities of mercury have been given before the slightest effect has been produced upon those parts. The difficulty has been, for the most part, proportioned to the obstruction of the circulation and the debility of the patient. When the gums have been at last affected with the red mercurial line, and the health has become slightly touched, then the urinary secretion has, in some instances, been surprisingly and suddenly rendered abundant. In example No. 36, in which anæmia existed, the gums, notwithstanding the long and free use of calomel and blue pill, remained pale and like white wax. At length a faint red line fringed the gums; this was the signal for the urine to flow in almost incredible amount. One day, I left the patient to pay a visit to Boulogne; he was then an enormously swollen man, lying very ill in bed. In three days I returned; he met me in the lobby, a thin and emaciated person; so great was the change, that I jocularly inquired of him how my patient up-stairs was going on, affecting not to recognise him. The gums had become tender, the mercury had told in some extraordinary way upon the effusion, and in three days had totally removed it, although every variety of diuretic and every contrivance had been employed for this object, for weeks, in vain. After a lapse of some considerable time, the dropsy and suppressed urine returned, but again to be removed by mercury. Dropsy finally established itself again, and the patient died in the country thoroughly exhausted. Did the mercury primarily act upon the kidney? did it excite the absorbents to increased activity? did it so act upon the heart as to cause it to operate with more efficiency upon the mass of blood and urge it along more readily in its hitherto reluctant and retarded course, unloading the distended and inactive veins, and filling the empty arteries, so as to supply an increased pabulum to the secreting organs whence the secretions might be withdrawn? or did it for a time mitigate visceral obstructions? In one way or another, it appeared that the pabulum supplied to the kidneys, in common with other organs, was increased at this time, for the pulse was decidedly larger than before.

The stomach presented some disorders for rectification. Irritability and vomiting required treatment. When the ordinary means failed, recourse was had to the use of ices, with extraordinary benefit. Iced mint tea was very grateful, and contributed to abate vomiting. Flatus proved the source of great distress to several patients. Various carminatives were employed, but with very partial and varied success. Purgatives afforded most relief. The examination of the body of No. 39 revealed such an enormously distended stomach, as fully to explain the great sufferings of the patient from flatulence. When the walls of the abdomen were divided, the stomach rose up in bold relief, an enormous bag of air, far above the other organs. It occurred to me, on reflecting on this condition of the stomach, and the great distress it caused the patient, who always maintained "it was only his stomach", that it would have afforded the sufferer great relief if a narrow elastic tube had been passed down the œsophagus, and had given vent to the pent-up gas.

I believe that such an instrument might under similar circumstances give great, though possibly only temporary relief. For a time, at least, it would comfort the patient, and give the heart more room to act. It is not impossible, moreover, that more than temporary advantages might result from it. Relieved from continued distension, the stomach might regain some of its long-lost tone, and less readily permit the evolution of gas, and more willingly contract upon it and cause its expulsion. I had lately an opportunity of observing how relief from long-continued distension of an organ will restore its tone and contractility. A gentleman, aged 40, consulted me for incontinence of urine of many years' duration. It had caused him and his family very great annoyance. I introduced a catheter into the bladder, more for the purpose of exploring the urethra than of emptying that organ; a large quantity of urine came away. Next time I saw him, he was extremely delighted to inform me, that ever since I had passed the catheter, he had made water as well as he had ever done in his life, instead of his urine constantly dribbling away from him. Instead of incontinence, he had distension; and the temporary relief afforded by the catheter, led to a complete cure. It is not too much to hope, that some similar advantage might follow the discharge of the long pent-up air in a distended stomach. Mr. Coxeter of Grafton-street has supplied me with an instrument, but I have not yet had the opportunity of testing its value in practice.

It is a highly important indication to retain the heart in a state of good muscular tone; and where this has given way to weakness and atony, to restore it as far as it is practicable. To retain the vigour of the heart is chiefly an object in cases of disease uncomplicated with secondary disease; for where these have occurred, the heart is, for the most part, found to be already greatly reduced in strength and efficiency. The means of effecting this object, in the more local examples, has been already noticed. If judiciously employed, they may prevent the accession altogether of the more advanced stage, or, at least, abate its progress. Fortunately we have means within our reach by which the advancement of softening and relaxation, when already begun, may be controlled; and even, under favourable circumstances, to a certain extent corrected. Amongst the foremost of these means may be ranked a sound liberal diet, comprising a large proportion of red fresh animal food, with, where circumstances connected with the health and constitution of the patient will permit, a little sound light wine; pure air; moderate exercise and driving; vegetable and mineral tonics, including sulphuric and nitric acids; and above all such tonics, for continuous use, particularly where anæmia is present, and there is freedom from irritability of the stomach, the various preparations of iron recommended in my work on its beneficial employment in such cases. One other great means of equalising the demand made upon the heart and its ability, besides doing what we can to strengthen that organ, is to relieve it as far as possible of its labour. The adoption of the recumbent or semi-recumbent posture for half an hour, two or three times in the course of the day, will go far to prevent the still somewhat vigorous organ becoming flaccid, and give the flaccid organ a period of comparative rest, and an opportunity to recruit itself. I have reason to know that this practice has proved of essential service, and, for the most part, it is not ungrateful to the patient. Cold sponging proves of great service in this direction, and even cold bathing, in some cases, I believe would prove highly beneficial: but care would be required in the selection of examples adapted for its employment.

A course of moderate counter-irritation, at the region of the heart, has proved of great service. It has certainly kept pain in check; and has appeared to regulate action, and retard the progress of morbid growth. It is well effected by means of chamois leather dipped in linimentum ammoniæ.

In conclusion I shall add, that the treatment to be as successful as it should be, the nature of each case must be made out, the broad indications recognized, and the most efficient and simple means of fulfilling them suitably employed. With this rule reduced to practice, the formalities of routine may be dispensed with. The necessarily limited character of a communication of this kind prevents my alluding to many topics of great therapeutic interest which I otherwise should gladly have touched upon. The same want of space has reluctantly prevented my referring to the valuable contributions, on the same subject, made by many eminent members of the profession. In further apology for this omission, I have to remind my readers that I have not aimed at the higher office of writing a treatise, but simply proposed to occupy the humbler field of relating some of my own observations.

TABULAR VIEW OF FORTY-TWO CASES OF

A. TWENTY

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
1	M. C.	10, F.	Comfortable.	None recorded.	Acute rheumatism, twice, treated without loss of blood.	Three months.	Hypertrophy, with mitral valve alteration.
2	M. L.	61, F.	Exposure.	None.	Weakness and chronic bronchitis for years.	Probably some years.	Dilatation.
3	T. C.	26, M.	Habitual excess in spirits; violent exertions; shaking the person in twisting hair.	None.	Gonorrhœa five years ago, followed by hernia humoralis, leaving to this time swelling of testes.	Two years; but aggravation two last mths.	Hypertrophy.
4	M. S.	25, F.	Quiet; comfortable.	Father died of ossified. heart, aged 70.	" Frequent attacks of infl. in lt. side of chest," treated with leeches and blisters.	Two years.	Hypertrophy and dilatation.
5	J. C.	26, M.	Comfortable.	None.	Acute rheumatism in joints and muscles, six years ago; not tr. for a week, then removed to hosp., where had leeches appld. to region of heart.	Six years.	Hypertrophy and dilatation.
6	B.	72, F.	Expos. to cold, wet, and steam.	None.	Gout, with deposit in hands, during last 14 years.	Ten years.	Dilatation and hypertrophy.
7	J. J.	9, M.	Quiet; comfortable.	None recorded.	Scarlet fever immediately before, during wh. pleurisy, leaving slight hepatisation of left lung.	Some weeks.	Moderate hypertrophy.

STRUCTURAL DISEASE OF THE HEART.

SIMPLE CASES.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Impulse much increased, fremissement cataire, loud systolic murmur.	Much palpitation.	Not recorded.	Not recorded.	Not recorded.
Sounds loud, situs of heart increased; heart's contractions weak, disturbed; p. very intermittent.	Palpitation, moderate dyspnœa; occasional pain in head.	Hyoscy. for dyspnœa & palpit., pil. rhei c. to regulate bowels, lin. terebin. for bronchitis.	Improved considerably.	Improved.
Unusual succussion of præcordial region, impulse greatly increased, situs increased; first sound strong and rough.	Great palpitation, faint feeling at heart; moderate dyspnœa; p. weak, small, compressible; dyspepsia and flatus.	For recent aggrava., six leeches to præcardia, digit. hyoscy., sulp. magnesiæ, leeches repeated, Plummer's pill.	Was greatly relieved of urgent symptoms.	Relieved.
Tremor of ribs, great impulse, situs much increased, sounds strong.	Violent palpitation, dyspnœa; p. small, firm, intermittent.	At first leeches to præcordia, digitalis intern., subseq. prep. of iron.	No benefit followed the applicat. of leeches and the administration of digitalis; gen. health was much imprvd., and palpit. reduced by iron.	Health improved and local symptoms mitigated.
Trembling of ribs, situs increased, apex felt at seventh rib; impulse increased, and as if heart were unusually hard.	Palpita.; weak small pulse.	Rhubarb and magnesia, subseq. chalybeates.	Not recorded.	Not recorded.
Situs of heart increased, impulse increased; sounds loud; dilated veins in neck.	Palpitation, dyspnœa, cough, weak pulse.	Vegetable tonics, spir. of nit. ether.	General health improved, and local symptoms relieved.	Relief.
Situs and impulse moderately increased; veins of neck dilated; præcordial region more prominent than corresponding part of opposite side.	Palpitation; p. regular, weaker at right wrist than at left; moderate lividity of face.	Hydrarg. c. cretâ, carb. sodæ, hyoscy. first few days, subseq. iodide of iron.	Secretions improved and palpitation abated under first part of treatment; general health greatly restored by the latter portion.	Much relieved.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
8	M.	43, F.	Comfortable.	—	Rheumatism 17 years ago; injury of the right foot 12 yrs. ago; hence considerable lateral distortion of spine, raising right shoulder 3 inches above left.	Eleven years.	Hypertrophy.
9	S.	32, F.	Comfortable.	Rickets, small development.	Inflammation in chest when 8 years old. Bony fabric has been ill developed.	Fifteen years.	Hypertrophy and dilatation to a moderate extent.
10	W.	36, F.	Sedentary.	Rickets.	Bony fabric ill developed, short and contracted. Slight distortion of cervical spine in early childhood.	From childhood.	Hypertrophy and dilatation.
11	R. L.	18, M.	Violent exertions; temperate.	—	None.	Some years.	Hypertrophy, dilat., aortic valvular disease, and aortic aneurism?
12	S. S.	10, F.	Comfortable.	—	Acute rheumatism a year ago; a second attack 2 months ago, during which heart became implicated; ill attended to, and permitted to go out of doors; no bleeding till heart implicated.	Two months.	Mitral valve disease; moderate hypertrophy.
13	H. M.	3½, M.	Comfortable.	Parents highly nervous.	Spasmodic croup, very severe, and continuing some weeks, causing convulsions for some days. Disease induced by feeding, occurred 4 months before heart disease discovered. Influenza during croup.	Three years.	Disease of valves; moderate hypertrophy.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Impulse increased in force and in situs, sounds dull. Heart displaced to right of sternum by distortion of spine, and contraction of left side of thorax.	Much palpitation for years, constant dyspn.; weakness; small pulse, 100; flatus.	Rhub. and soda to improve secretions, vegetable tonics, foll. by iron.	Health improved much; the benefit from the use of iron was very marked; the palpitation was nearly removed, and the increased impulse was greatly abated.	Much relieved.
Impulse of heart constantly increased, slightly in force, greatly in extent. Sounds rather dull, jugular veins dilated.	Palpitation, violent and frequent; pulse weak, intermitt.; slight congestion of head; headache.	Iron.	Patient gained much strength from use of iron; health was greatly improved during some years from commencement of treatment, and was the same when patient was last seen.	Relieved.
Situs of heart increased, impulse increased in force. Jugular veins dilated; intermittent action.	Palpitation, intermittent pulse, dyspnœa; moderate debility; oppression in head; much flatus.	Leeches over ht. to reduce suspected congestive action, hyoscy. intern., and cataplasm of morphia to præcordia for same purpose, purgatives.	Patient derived great advantage from this treatment; palpitation greatly reduced, so was the oppression in head; morphia acted well as a sedative; a removal to country made disease of heart almost disappear.	Great relief.
Situs of heart increased, impulse extended, action heaving; slight soufflet accompany. systole, heard at 2nd and 3rd ribs on left side; left clavicle slightly elevated, 2nd & 3rd ribs bulging; sounds of heart low.	Violent palpitation, pain in region of heart; intermit. very weak pulse; sibilus at second and third ribs.	Leeches at first, then saline laxatives, followed by vegetable tonics.	The pain at heart, which had followed great exertion, was reduced by leeches and salines, and the general health was subsequently established by tonics and country air; three years after the patient was no worse.	Relief.
Loud systolic sound resembling "ha", breathed very loud, loudest at apex, extending to third rib; increased action of heart.	Sense of pain; palpitation; disturbed health; p. weak, regular.	Numer. leeches to præcordia immediately, calom., Dover's powder, and colchi., iodide of iron.	Under first part of treatment, pain and inordinate action greatly abated, and pyrectic sympts. removed; iron gave vigour and "patience" to heart and improved general health; sound became greatly less loud and harsh.	Relief.
Very loud systolic sound, very prolonged, resembling "ha" harshly breathed out, masking first sound, and rendering second sound difficult to be heard; loudest at sternum, level with third rib; but heard nearly over the entire chest; moderate increase of heart's situs & impulse; veins of neck rather full.	Moderate continuous over-action of heart; no other symptoms whatever; pulse regular, good size, and firm.	Pure air, a wet-nurse at first, occasional residence in the country, no medicine.	Has enjoyed good health, and has grown a fine blooming boy; but sound is the same, and action of heart still preternaturally great.	Perfect health.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
14	E. B.	18, F.	Destitute.	—	General debility, bad development. Small-pox in infancy. No rheumatism.	Some years.	Mitral valve disease; moderate hypertrophy.
15	E.	43, F.	Comfortable.	—	Large abscesses in groin, and in loins, discharging quarts of pus, now healed.	Six months certain, but probably more.	Dilatation; moderate hypertrophy.
16	S.	80, F.	Comfortable.	None.	Recent contus. of hip; great distortn. of spine, begun only a few weeks back, throwing the chin upon the right clavicle; obliterating the neck, distorting thorax, and reducing entire length about one quarter, rendering patient, formerly very tall, very short.	Unknown; discovered only a week or two before death.	Valvular dis., with hypertrophy. Aortic outlet reduced by distortion of chest.
17	J. C.	20, M.	Comfortable.	Weakly health.	Distortion of thorax begun in childhood, has increased latterly; thorax at heart decidedly depressed, to right of sternum protuberant.	Some years.	Moderate hypertro., from moderate distortion of thorax.
18	W. E.	20, M.	Comfortable.	—	None.	Congenital.	Moderate hypertrophy.
19	C.	22, M.	Gymnastic exercises.	—	None. Front of thorax unduly prominent, from gymnastics.	Some years.	Moderate hypertro. from gymnastic exercises.
20	B.	26, M.	Exposure to cold.	Delicate health.	General delicacy from childhood. Moderate malformation of chest, with deficiency of left side.	Some years.	Moderate hypertro., with excited action, connected with malformation of chest, and deficient lft. side.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Loud hissing sound replaces first sound; impulse of heart increased.	Papit., dyspnœa, cough, P. somewhat weak, regul., weakness, pain in head,cong.of lung., vom. from irritab., occas. looseness.	Tincture of hops, with gentian infu.	Vomiting allayed, general health improved, and less palpitation.	Relief.
Impulse increased in force and extent; sounds clear.	Palpit. very severe and frequent, dyspn., weakness, P. small, hard, regular, some pain in heart formerly, occas. vomiting.	Morphia, for pain in heart, on one or two occas., conium and hyoscy. internally, & lin. ammo. and leeches exter., to abate palpitat.	Pain held in check with morphia; palpitation much reduced by other treatment.	Relief.
Loud systolic bellows sound, loudest a little above nipple; impulse increased; veins of exterior of chest dilated.	Moderate excitement of heart, recent œdema of feet.	Mild diuretics, hyoscyamus.	Nothing was attempted in this case but to relieve symptoms.	Died a week or two after valvular murmur discovered. No necropsy.
Impulse strong, heaving, and unduly extended; sounds rather dull.	Palpit., faintness, weak pulse, intermittent; occasional trifling hæmoptys.; moderate dyspeps.	Tonics, country air, exercise, iron.	No hæmoptysis of late, general health is improved, and over-action of heart moderated.	Relieved so as to attend to business.
Impulse decidedly increased in extent and force; sounds rather dull.	Occas. palpitation; occas. pain in region of heart; health good, pulse strong.	Pil. conii., moderate exercise and exertion, pure air and good diet.	Pain removed, palpitation somewhat reduced.	Over-action of heart moderated.
Impulse decidedly increased in extent and force; and action heaving.	Palpitation occasionally, over-action constant., occasional faintness; P. weak, pallor of counten., pains in region of heart.	Quietude, sedatives, chalybeates, abstinence from gymnastics.	Palpitation reduced, but over-action continues, general health improved, less faintness.	Improved.
Impulse increased in force and extent; heart is felt beating on right side of sternum, in which direction it is forced by depression of left side at præcordia.	Fits of palpitat., constant over-act., moder. dyspnœa, with dry rhonchus; pallor, feeble rapid pulse., iritability of stomach & vomiting; great emaciation and debility; irritability of bowels from jalap, &c., chronic bronchitis, dry rhonchus.	Small dose of calomel with hyoscyamus and aloes at first, followed by hyoscyamus and camphor, hops and liq. opii, lin. terebinth. externally, iron.	Extraordinary benefit from treatment, no vomiting, though fits of palpitation; constant action of heart reduced, P. quiet, stronger, T. clean, appetite enormous, patient and friends astonished at change, death being soon apprehended. The tinct. of hops with liq. opii was particularly useful in allaying irritability of stomach and supporting system; iron is well tolerated and is giving bloom to face.	Symptoms relieved to only moderate extent; over-action of heart.

B. TWENTY-TWO CASES,

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.	Physical Signs.
21	C.	49, M.	Sea-faring; exposure, dissipation.	No record.	Fever in India. Fistula in ano.	Probably many years; only now discovered.	Hypertrophy, without orificial alteration.	Action heaving, situs increased, impulse increased, pulse hard, jugular veins dilated and pulsating.
22	N.	75, M.	Laborious; spare living.	Scrofula in family.	General delicacy from infancy, symptoms resembl. those of gall stones. Indigestion, pneumonia.	Probably many years.	Hypertrophy, ossification of aortic valves.	Action strong, heaving; impulse increased, situs increased. P. hard, veins of neck much dilated. Heart's sounds rough; murmur with 1st sound, inaudible before death.
23	R. C.	17, M.	Exposed to weather.	Rheumatism.	Acute rheumatism four years before, treated with leeches to chest.	Known for two years.	Immense hypertrophy, with mitral valve disease.	Apex of heart felt beating at 8th rib; impulse very great. Præcordial region prominent; 1st sound a loud prolonged rasp. Pulse weak, irregular, forms abruptly.
24	C. W.	40, F.	Exposed to cold and wet.	Consumption.	Inflammation in chest from cold.	Three years.	Dilatation, with weakness.	Action of heart masked by respiratory sounds. P. very irregular, weak.
25	J. B.	62, F.	Comfortable.	Rheumatism	Two miscarriages, causing great debility, slight hæmoptysis 4 years ago.	Twenty years.	Hypertrophy, with dilatation, roughness of aortic valves.	Impulse increased, situs increased, 1st sound rough, jugular veins dilated. P. firm, small, slightly intermittent.
26	J. W.	61, M.	Exposure to cold, dissipation.	Consumption.	Rheumatism on several occasions, hæmorrhoidal dischrg. frequently till four years ago.	Three and a half years.	Hypertrophy, ossification of aortic valves with spicula.	Impulse increased, blowing systolic sound; jugular veins dilated.
27	C.	50, F.	Quiet, comfortable.	None.	Repeated attacks of inflammation in chest, fever.	Many years.	Hypertrophy.	Situs and impulse of heart increased, 1st sound rough, jugular veins dilated.
28	M. F.	40, F.	Exposure to cold and wet.	None.	No disease.	Three years.	Hypertrophy.	Situs from 3rd and 7th rib and to right of sternum. Impulse increased; 1st sound loud, rough.

WITH SERIOUS COMPLICATIONS.

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
Palpitation, dyspnœa, exhaustion.	Active congestion of head; contr. pupils; cong. of lungs, with dry rhonchus; albuminuria, alternating with melæna; hæmoptysis formerly, lately hæmatemesis, now melæna; œdema of feet; flatus and vomiting.	Hydrocyanic acid for stom.; cupping at back for lung-congestion.	The patient being in an almost dying state when first seen, profited little by treatment.	Died in a few days.	Heart nearly double usual size, orifices healthy, liver healthy, kidneys rather small.
Dyspnœa, palpitation.	Passive cong. of head, headache, dil. pupils, emphys. lungs, left lobe of liver filled with hydatids, œdema of feet, ascites, flatus, eructations.	Hyoscyamus. The hydatid tumour rendered the heart disease of only secondary importance.	Only moderate relief to dyspnœa, and palpitation reduced by hyoscyamus.	Death.	Heart double the size of patient's fist, walls thickened, aortic valves ossified so as neither to open or close perfectly.
Dyspnœa, palpitation, debility.	Anas. of legs, sloughing of integuments, ascites; liver's edge 2 in. below cartil.: jaundice; much flatus.	Mercury for liver; iron to strengthen system and heart; greatly weakened by previous loss of blood by leeches.	Under care of a well-known physician, breathed through a tube for a long period, but to no account; mercury reduced liver, removed jaundice; iron restored the general health and invigorated heart's action for some years.	Died some years after.	None. Through an omission on the part of the gentleman entrusted with the case, during indisposition of the writer, the opportunity of making an examination was lost.
Palpitation, dyspnœa.	Œdema of feet and emphysema, chron. bronch., occas. hæmopt., flatus.	Preparations of iron.	Very striking improvement in the general health, and in respect of the chest followed the treatment.	Greatly relieved when last seen.	
Palpitation, dyspnœa, pallor, exhaustion.	Anas., melæna, oppress. in head, cong. of lungs, flatus.	Tonics, spirits of nitrous ether, brandy.	Material benefit from treatment.	Died in a few months.	No examination was permitted.
Great exhaustion, much dyspnœa, violent palpitation.	Albuminuria, extens. ascites, anas. of legs and hands, congest. of head, atrophy and cirrhosis of liver; flatus and vomiting.	Spirits of nitrous ether in broom tea.	The patient being in a dying state when first seen, little or no relief was afforded.	Died in two days.	Heart's wall enlarged, cavities increased somewhat, heart weighed 25 oz., pericardium adherent, aortic valves had ossific deposit with spicula, pleural adhesions, cirrhosis, liver weighed 2 lbs. 9 oz., omentum much shrunk; tubercle size of pigeon's egg, containing tuberculous matter, in right kidney; peritoneal covering of liver and spleen thickened and white.
Palpitation, dyspnœa.	Urine scanty, melæna, passive cong. of head, cong. of lungs.	Vegetable tonics and spirits of nitrous ether.	Health much improved.	Health improved.	
Violent palpitation, great dyspnœa, strong large pulse.	Occas. slight hæmopt., great cong. and throbbing of art. in head, with suicidal tendency.	Leeches to præcordia; hyosciamus.	Treatment afforded much relief.	Much relieved.	

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.	Physical Signs.
29	G. T.	62, M.	Violent exertions.	None.	Contusion of breast from kick of horse.	Twenty-seven years.	Dilatation without orificial alteration.	Situs increased, impulse ordinary, sounds loud.
30	J. G.	36, M.	Very violent exertions as a coal-heaver.	None recorded.	None recorded.	Probably some months.	Not clearly made out.	Not well explored. Further examination was postponed, on account of the unwashed state of the person, till next day, but death prevented further investigation.
31	B.	47, M.	Great excess in use of brandy for years.	None recorded.	None recorded.	Probably some years.	Great dilatation; attenuated, soft, and fatty walls; aortic & mitral valves ossified.	A bellows sound accompanied systole. Pulsation of jugulars.
32	E. C.	55, M.	Dissolute.	—	None.	Years.	Hypertrophy, softening.	None reported.
33	W. S.	49, M.	Laborious.	—	Colica pictonum from employment as a painter.	Believed by patient to be nine months.	Great enlargement and dilatation, with immense aneurism of aorta.	Projection on right of sternum, back of 2nd, 3rd, 4th ribs, bulging of heart's region. Heart's sounds weak, systolic bellows sound, loudest at 3rd rib, diastolic sound prolonged, with slight soufflet.

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
Palpitation, fluttering of heart, dyspnœa, exhaustion, P. rapid, weak, regular.	Anas. of legs, extens. œdema, mod. hydrothorax and hydropericard., œd. of lungs, cong. of brain, epilepsy (15 years), liver mod. cirrhosed, much flatus.	Spirits of nitrous ether, broom tea, calomel, and squills.	Patient was obviously sinking when first seen, and as he died in two days the treatment was of no use.	Died in two days after first visit.	Pericardium healthy, contained 2 oz. reddish serum; heart voluminous, size of extended hand and fingers; walls soft, not thickened; cavities enlarged; orifices and valves healthy; some reddish serum in both pleuræ; œdema of lungs; they were soft, and felt like a polypus, smooth, and when cut into, discharged red serum; red serous fluid in peritoneum; liver atrophied, hardened with streaks of white coagulated lymph pervading its structure; peritoneal cavity rough and adherent; spleen small and hardened; stomach & intestines congested.
Dyspnœa for some months, of late orthopnœa, veins of neck dilated, P. rapid, weak, sinking.	Great anas. of lower extrem. (5 wks.), œdem. of lungs, occasion. hæm. fr. bowels, stup. some days, convulsions before death.	Spirits of nitrous ether, broom tea, calomel, and squills; cordials; supporting diet.	No result from treatment.	Died in two days.	
Great dyspnœa, sinking.	Anas. of legs, mod. hydrothorax and ascites, cong. of head, with sense of oppression; liver enlarged, right lung pushed up, cong. of stom., flatus, vomiting.	Not recorded.	Not recorded.	Death.	Much subintegumentary fat; heart of large volume, with all the chambers unusually capacious, covered in front with much fat, very soft breaking down under the fingers, like soft liver, of dark colour; the columnæ carneæ were the only muscular parts of the right ventricle: calcareous deposit, size of a barleycorn, in mitral valve; tricuspid and pulmonary valves healthy; cirrhose of liver, w. hob-nailed surface; gt. enlargt. rising on right side to near the 3rd rib; a few oz. of gravy soup-looking serum found both in thorax and abdomen; lungs greatly gorged with dark blood, and thrust up to the superior part of chest, on right side by liver, and on the left by the enld. hrt., and the stom. greatly dis. with gas.
No special symptoms.	Bright's dis. of kidney in first stage, tubercles and cavities in right lung, liver enlar. and hard.	Not recorded.	None.	Death.	Particulars already given in part. Prostrate gland enlarged; heart enlarged and soft; aorta presented numerous patches of steatomatous deposit.
Sense of throbbing at heart, feeling of pricking and smarting at right shoulder and in arm, cough, dyspnœa, hæmoptysis, food appeared to be arrested three or four inches down œsophagus, emaciation, œdema of face.	Œdem. of face, cong. of lungs, hæmoptysis.	V. S. Leeches over heart; morphia.	Pain and cough much relieved by bleeding; morphia afforded sleep and comfort.	Death.	Great enlargement of heart, walls somewhat thickened, chambers enlarged, valves healthy, aneurism of ascending aorta, size of a child's head.

No.	Name.	Age and Sex.	Habits of Life.	Family Diseases.	Antecedent Disease.	Duration of Disease.	Form of Disease.	Physical Signs.
34	H.	57, F.	Comfortable.	——	Metritis; white leg seven years ago, after accouchement.	Seven years.	Hypertrophy.	Situs of heart increased, impulse increased, action heaving, sounds dull.
35	W.	31, F.	Comfortable.	——	Two miscarriages, the last followed by inflam. of womb and white leg. No rheumatism.	Fourteen months.	Mitral valve disease, dilatation, hypertrophy.	Systolic sound resembling the word "who", softly pronounced, loudest at 6th rib. Impulse increased in force and extent, veins of neck dilated.
36	H. W.	40, M.	Dissipated. Excess in spirits.	None.	None known.	Some years.	Hypertrophy, dilatation, tumultuous action.	Impulse increased, unduly extended; sounds dull. No abnormal sounds. Dilatation and regurgitation of jugulars, venous murmurs from anemia.
37	V.	59, M.	Exposure to cold. Excess in spirits in early manhood.	None recorded.	None recorded.	Probably many years.	Hypertrophy, dilatation, mitral valve disease.	Impulse increased in force and extent; sounds dull; slight bellows murmur, loudest at apex, systolic. P. weak, intermittent, abruptly formed. Blue face.
38	B.	40, F.	Comfortable.	None.	Acute rheumatism.	Eight years.	Hypertrophy and dilatation.	Impulse greatly extended, moderately increased in force; sounds dull. Projection of ribs at apex, pulsating.
39	F. G.	65, M.	Exposure to cold.	Gout.	Pleuritis, pericarditis, endocarditis, some 20 years ago, from exposure to rain and cold. Gout.	Many years; probably twenty.	Hypertrophy, calcareous deposit of aortic and mitral valves, great thickening of endocardium, softening.	Moderate increase of impulse observed on one or two occasions, with great difficulty on account of rhonchus; purple face.

Symptoms.	Complications,	Treatment.	Effects of Treatment.	Result.	Autopsy.
Palpitation, throbbing at apex of chest, hard, tense pulse, œdema, dyspnœa.	Formerly ascites, œdema of feet, throbbing of head.	Purgatives and diuretics, including jalap, colocynth, and blue pill, spirits of nitrous ether.	These evacuants gave relief, but debility increased.	Relief.	
Palpitation, great dyspnœa, P. regular, 80, great debility.	No org. dis. of kidney, but ur. at times nearly suppressed; extensive ascites, effus. in both sides of chest, cong. of bronch., liver greatly swollen.	Mercury to salivation before my treatment, but of no avail; magnes. sulph., squills, broom, and calomel, iodide of potass., compound jalap powder, tapping abdomen, ferri potassio tartras, spirits of nitrous ether.	Treatment of no avail till abdomen tapped; little fluid came away at once, but continued to ooze out for days; this gave great relief; the urine came away in increased quantity, and diuretics acted with more readiness; iron gave strength, but patient died soon after, under the care of another medical attendant.	Temporary relief; death.	An autopsy was made, but the only particulars obtained were "heart and liver greatly diseased."
Palpitation, irregular intermittent action, dyspnœa, dilated veins, irregular intermittent pulse, dropsy, hæmorrhage, etc.	Ascites, anas., occas. hæm. frm. bowels to 1 pt., consid. hæmop., tuberc. at apex of rt. lung, great oppres. of head, delir. coma, liver gtly. enlarged, flatus.	Tonics, diuretics, purgatives, mercury, bleeding.	Very slight benefit to dropsy, and tumultuous and regurgitant action of heart till within a day or two of gums becoming tender under mercury, which was long of being effected; on two occasions the urine passed copiously and carried off the dropsy in a few days; bleeding to extent of a few ounces gave great relief to agonizing oppression in head.	Relieved; death after some months.	Dying in the country, no examination made.
Flatus in stomach, palpitation, pain of oppression in region of heart, dyspnœa, anasarca, delirium, and coma.	Cong. of kidneys, urine slty. albmn. once or twice, great oppress. of head, delir., coma at last, flatus.	Saline purgatives and spirits of nitrous ether at first; slight bleeding for head; mercury and squills and scarifications for dropsy.	The first treatment so relieved the patient of flatus, that he believed himself cured; mercury and squills proved of little use, though continued to salivation; dropsy effectually carried off by scarifications of legs.	Relieved for a time; died in a few weeks.	None.
Palpitation, pain in region of heart, great dyspnœa, anxiety of mind, flatus, vomiting, pyrosis, cough, hæmoptysis, emaciation, amenorrhœa.	Frequent hæmoptysis, cong. of lungs, pyrosis, frequent vomiting, flatus.	Bismuth, effervescg. draughts and opium, for stomachic irritation; rest in bed for excitement of heart; counter-irritation; latterly vegetable tonics and chalybeates.	The stomachic irritation completely subdued; heart became quiescent; the præcordial tumour was decidedly reduced; and the general health immensely improved.	Great improvement.	
Great dyspnœa, loud persistent rhonchus, latterly moist, oppression in head, irritable temper, immense distension of stomach from flatus, anasarca of lower extremities, P. usually regular, of moderate strength.	Extens. anas. of lower extr., no albuminuria, hydrothor., emphys., œdema of lungs, congest., chronic bronch., oppres. of head, headache, slight hæmopt. 2 yrs. before, impatience; liver congest., stomach much distended by flatus.	Cupping of head and chest and bleeding for congestion; diuretics, purgatives, antispasmodics, stimulants.	The patient being full of blood, benefited greatly by the loss of some ounces; he was bled a month before death, and so great was the consequent mitigation of the dyspnœa and rhonchus, that the sounds of the heart, till then inaudible, became more distinct than they had been for years.	Death.	Heart moderately enlarged, flabby, and soft. Pericardium adherent nearly throughout; endocardium thickened throughout, quarter of an inch thick, and cartilaginous in left ventricle; aortic valves ossified; aorta ossified to considerable extent; emphysema of lungs, œdema of lungs; effusion in both pleuræ; congestion of lungs; enormous distention of the stomach from flatus; liver congested; kidneys congested; left presented a cyst, size o horse-bean, containin tuberculous matter.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Disease.	Duration of Disease.	Form of Disease.	Physical Signs.
40	S.	60, F.	Comfortable.	None.	Rheumatism.	Some years.	Hypertrophy.	Impulse stronger, and more extended than natural, heaving.
41	M.	40, F.	Exposure to cold.	None recorded.	None recorded.	Some years.	Hypertrophy to great extent.	Impulse greatly extended and increased in force.
42	G.	73, M.	Exposure in military service in tropics for many years. Drank freely.	None recorded.	None recorded. Had chronic irritation of bladder.	Forty years.	Great hypertrophy, with extraordinarily rapid action.	Impulse hard, knocking, greatly extended, succussion of the entire chest, perceived through right shoulder; sounds dull, ordinarily weak; no abnormal sounds.

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
Palpitation occasionally, action always great, sense of fluttering, pain darting from heart down left arm, moderate dyspnœa, debility, weak pulse, 88, regular, copious discharge of blood from lungs on two or three occasions.	Copious hæmoptysis once or twice, conges. of lungs, flatus.	Alteratives, hops, cinchona, stimulating embrocation to chest and arm.	Palpitation somewhat reduced, and strength moderately increased; pain not materially relieved.	Some improvement.	
Palpitation, constant over-action, hydrothorax, anasarca of lower extremities, dyspnœa, exhaustion, aphthæ of tongue.	Anas. of lower extrem., hydrothorax, cong. of lungs.	Hyoscyamus, spirits of nitrous ether, seton at præcordia.	Some relief from hyoscyamus and spirits of nitre; none from seton.	Some relief for a time; death after a few months.	No examination.
Constant over-action, with pulse about 80, frequent fits of extremely rapid action, with small scarcely perceptible pulse of from 140 to 200; the action of the heart resembled quivering, and the foot when the legs were crossed would move like the wheel of a watch; orthopnœa, œdema of feet and ankles latterly, chronic irritation of bladder, with alkaline mucous urine, exhaustion.	Œdema of feet and ankles some days before death, cong. of lungs, dry rhonchus.	Morphia to allay palpitation; spirits of nitrous ether, squills, and saline diuretics; brandy, chloric ether; animal diet.	Morphia proved of immense service, would reduce pulse from 200 to 80; chloric ether induced extremely violent paroxysm of palpitation.	Great relief for a few days; death.	No examination permitted.

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